STATEMENT OF BASIS

Ft. Rucker
Ft. Rucker, Alabama
Dale County
604-0008

This proposed Title V Major Source Operating Permit renewal is issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

The significant sources of air pollutants at this facility include twelve painting/depainting operations, 178 boilers, aircraft engine test cells, peaking plant, and a bulk gasoline plant. This facility is subject to the applicable standards for NESHAP MACT Subparts GG, ZZZZ, and PPPPP.

The facility is manned 8,760 hours per year. Based on the Title V permit application, this facility is a potential major source for NOx, SO_2, and volatile organic compounds (VOC) from the facility operations.

This Title V Major Source Operating Permit renewal will also incorporate equipment covered by Air Permits into the Major Source Operating Permit (MSOP) that have been issued to Ft. Rucker since the last issuance. The Air Permits that are being incorporated into the Title V are the following:

X052 Paint Facility Located at Block 1000 (2-20 foot long paint booths and 1-10 foot long paint booth)
X053 Paint Facility Located at Building 30300 (2 paint booths)
X054 3.17 MMBtu/hr Boiler (Building 50202)
X055 AAFES Triangle Shoppette - Gasoline dispensing facility

Other changes to the Title V Major Source Operating Permit include:

1. Changed name of unit from **Aircraft Dry Stripping Facility (Building 40139)** to **Abrasive Blasting (Building 40139)**
2. Grouped all of the small natural gas boilers formerly from Appendices A and B into Appendix A.
3. Grouped all of the small fuel oil boilers formerly from Appendices C and D into Appendix B.
4. Removed references to and requirements for 40 CFR Part 63, Subpart DDDDD (Boiler MACT).
5. Removed Buildings 405 and 1001 because surface coating operations have ceased.
6. Removed all boilers which have ceased operations since last permitting.
7. Added Firing Range Operations which are only subject to the general provisos at this time.

Surface Coating (Non MACT, Non NSPS): Building 416

Emissions Standards:

- Particulate Emission Standard =

  $E = 3.59P^{0.62}$ (P < 30 tons/hr)
  where E = Emissions in pounds per hour
  P = Process weight per hour in tons per hour

  ADEM Admin. Code R. 335-3-4-.04-(1)

  Expected Emissions: Based on mass balance, the expected emissions would be 0.007 lb/hr (0.03 TPY) from the stack.

- VOC Standards =

  There are no specific applicable VOC emissions standards for these units

  Expected Emissions: Based on mass balance, the expected emissions would be 3.12 lb/hr (13.7 TPY) from the stack.

Periodic Monitoring:

Based on the expected emissions as compared to the allowable emissions these sources are subject to no additional specific requirements other than those listed in the general permit provisos.

CAM:

These sources are not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY and do not have any emission limits.

Surface Coating (MACT): Buildings 30103, 30109(A), 40135, 50201, 50209, and 25105 (A)

Emissions Standards:

- Particulate Emission Standard =

  $E = 3.59P^{0.62}$ (P < 30 tons/hr)
  where E = Emissions in pounds per hour
  P = Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

Expected Emissions: The expected particulate emissions are based on a mass balance for each building and associated stack.

Expected Particulate Matter Emissions

Building	lb/hr	TPY
30103	0.003	0.01
30109(A)	0.002	0.01
40135	0.01	0.04
50201	0.002	0.01
50209	0.001	0.006
25105(A)	3.6E-4	0.002

- VOC Standards =

These coating operations are subject to the applicable requirements contained in the general standards contained in Section 63.743 of Subpart GG of 40 CFR Part 63.

Expected Emissions: Based on a mass balance, the maximum expected emissions for each building and associated stack are listed below.

Expected VOC Emissions

Building	lb/hr	TPY
30103	1.23	5.39
30109(A)	0.89	3.89
40135	4.88	21.4
50201	1.25	5.47
50209	0.67	2.93
25105(A)	0.16	0.71

Periodic Monitoring:

The permittee shall monitor the coating operations in accordance with Section 63.751 of Subpart GG of 40 CFR 63 to include paragraphs (a) enclosed spray gun cleaners, (c) dry particulate filter primer and topcoat application operations, (d) particulate filters depainting operations, and (f) reduction of monitoring data.

CAM:

These sources are not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY.

Abrasive Blasting (Building 40139)

Emissions Standards:

- Particulate Emission Standard =

$E = 3.59P^{0.62}$ ($P < 30$ tons/hr)
where E = Emissions in pounds per hour
P = Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

At maximum capacity the PM allowable for this unit would be 2.96 lbs/hr.

Expected Emissions: Based on manufacturers design, the expected emissions would be 0.001 lb/hr (0.005 TPY) from the stack.

- HAP Emission Standard =

This source is subject to the applicable requirements contained in the standards for depainting operations contained in Section 63.746 of Subpart GG of 40 CFR Part 63 to include paragraphs (a) applicability and (b) HAP emissions-non-HAP chemical strippers and technologies. This source is also subject to the applicable requirements contained in the standards for handling and storage of waste contained in Section 63.748 of Subpart GG of 40 CFR Part 63.

Periodic Monitoring/MACT Monitoring:

The permittee shall monitor the coating operations in accordance with Section 63.751 of Subpart GG of 40 CFR 63 to include paragraphs (a) enclosed spray gun cleaners, (c) dry particulate filter primer and topcoat application operations, (d) particulate filters depainting operations, and (f) reduction of monitoring data.

Based on the expected emissions as compared to the allowable emissions these sources are subject to no additional specific requirements for PM_{10} other than those listed in the general permit provisos.

CAM:

This source is not subject to CAM since it does not have pre-controlled potential emission of greater than 100TPY.

Main Substation Peaking Plant

The substation peaking plant consists of four Reciprocating Internal Combustion Engines that fire natural gas only.

Emissions Standards:

- Nitrogen Oxide Emission Standard =

This peaking plant shall not operate more than 2,000 hours per any twelve month consecutive period combined. The internal combustion engines at this peaking plant shall only burn natural gas.

ADEM Admin. Code R. 335-3-14-.04 Anti-PSD limit

Expected Emissions: Based on AP-42 and a limit of 2000 hours/yr, the expected emissions would be 13.9 TPY from the stack.

Periodic Monitoring

The amount and type of fuel used in the peaking plant shall be monitored. Records of daily, monthly, and consecutive twelve month total fuel usage and hours of operation must be maintained. There is no periodic monitoring for opacity since the engines fire natural gas only.

CAM

This source is not subject to CAM since it does not have pre-controlled potential emission of greater than 100TPY and there is no control device.

MACT

These units are affected sources under 40 CFR Part 63 Subpart ZZZZ. However, since these units are existing 4 stroke lean burn (4SLB) stationary reciprocating internal combustion engine, there are no requirements under this subpart.

Bulk Plant, Building 903

Emissions Standards:

- Volatile Organic Compounds (VOC) Emission Standard =

This source is subject to the applicable requirements of ADEM Admin. Code R. 335-3-6-.05, "Bulk Gasoline Plants." This source is also subject to the applicable requirements of ADEM Admin. Code R. 335-3-6-.20, "Leaks from Gasoline Tank Trucks and Vapor collection Systems"

ADEM Admin. Code R. 335-3-6- (.05 & .20)

Expected Emissions: Based on AP-42, the maximum expected emissions would be 0.45 lb/hr and 1.92 TPY from each unit.

Periodic Monitoring

The permittee shall monitor the bulk plant in accordance with ADEM Admin. Code R. 335-3-6.

CAM

This source is not subject to CAM since it does not have pre-controlled potential emission of greater than 100TPY and there is no control device.

AAFES Triangle Shoppette - Gasoline Dispensing Facility

Emissions Standards:

- Volatile Organic Compounds (VOC) Emission Standard =

This source is subject to the applicable requirements of ADEM Admin. Code R. 335-3-6-.07, "Gasoline Dispensing Facilities- Stage 1." This source is also subject to the applicable requirements of ADEM Admin. Code R. 335-3-6-.20, "Leaks from Gasoline Tank Trucks and Vapor collection Systems"

ADEM Admin. Code R. 335-3-6- (.07 & .20)

Expected Emissions: Based on AP-42, the maximum expected emissions would be 0.47 lb/hr and 2.04 TPY from each unit.

Periodic Monitoring

The permittee shall monitor the gasoline dispensing facility in accordance with ADEM Admin. Code R. 335-3-6. Records of the monthly throughput quantities in gallons in these units shall be maintained for a minimum of five years.

CAM

This source is not subject to CAM since it does not have pre-controlled potential emission of greater than 100TPY and there is no control device.

Aircraft Engine Test Cells: Cairns AHP METS, Building 7206 Cells, 2 - 9

Emissions Standards:

These operations are not subject to any standards other than the applicable standards contained in the general provisos.

Expected Emissions: Based on AP-42, the maximum expected emissions are listed below:

CO - 1.45 lb/hr and 6.24 TPY
VOC - 1.03 lbs/hr and 4.43 TPY
NO_x - 1.00 lbs/hr and 4.30 TPY
PM - 0.24 lb/hr and 1.03 TPY
SO_2 - 0.12 lb/hr and 0.52 TPY

Periodic Monitoring

Due to the low amount of expected emissions, no periodic monitoring is warranted.

CAM

CAM is not applicable to the engine test cells since they do not use a control device, they have no emission limits and do not have a pre-controlled potential of greater than 100 TPY.

MACT

These units are affected sources under 40 CFR Part 63 Subpart PPPPP. However, since these units are existing sources, there are no requirements under this subpart.

Shell Field Paint Booth (MACT)

Emissions Standards:

- Particulate Emission Standard =

$E = 3.59P^{0.62}$ ($P < 30$ tons/hr)
where E = Emissions in pounds per hour
P = Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

Expected Emissions: Based on mass balance, the expected emissions would be 0.006 lb/hr (0.03 TPY) from the stack.

- VOC Standards =

This source is subject to the applicable requirements contained in 40 CFR Part 63 Subpart GG, Section 63.743, 63.744, and 63.748.

Expected Emissions: Based on mass balance, the expected emissions would be 2.57 lb/hr (11.3 TPY) from the stack.

- HAP Emission Standard =

This source is subject to the applicable requirements contained in the standards for depainting operations contained in Section 63.746 of Subpart GG of 40 CFR Part 63 to include paragraphs (a) applicability and (b) HAP emissions-non-HAP chemical strippers and technologies. This source is also subject to the applicable requirements contained in the standards for handling and storage of waste contained in Section 63.748 of Subpart GG of 40 CFR Part 63.

Periodic Monitoring:

Monitoring for this unit shall be in accordance with the provisions found in 40 CFR Part 63 Section 63.751. Based on the expected PM emissions as compared to the allowable emissions these sources are subject to no additional specific requirements for PM other than those listed in the general permit provisos.

CAM:

This source is not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY.

Surface Coating (MACT): Buildings 1016 and 30300

Emissions Standards:

- Particulate Emission Standard =

$E = 3.59P^{0.62}$ ($P < 30$ tons/hr)
where E = Emissions in pounds per hour
P = Process weight per hour in tons per hour

ADEM Admin. Code R. 335-3-4-.04-(1)

Expected Emissions: The expected particulate emissions are 0.006 lb/hr (0.03 TPY) for each building based on a mass balance.

- VOC Standards =

The VOC emissions from the sources shall not exceed 20.0 tons during any consecutive twelve (12) month period for each building.

ADEM Admin. Code R. 335-3-14-.04-Anti-PSD limit

This source is subject to the applicable requirements contained in 40 CFR Part 63 Subpart GG, Section 63.743, 63.744, and 63.748.

Expected Emissions: The expected VOC emissions are 2.57 lb/hr (11.3 TPY) for each building based on a mass balance.

- HAP Emission Standard =

This source is subject to the applicable requirements contained in the standards for depainting operations contained in Section 63.746 of Subpart GG of 40 CFR Part 63 to include paragraphs (a) applicability and (b) HAP emissions-non-HAP chemical strippers and technologies. This source is also subject to the applicable requirements contained in the standards for handling and storage of waste contained in Section 63.748 of Subpart GG of 40 CFR Part 63.

Periodic Monitoring:

The permittee shall monitor the coating operations in accordance with Section 63.751 of Subpart GG of 40 CFR 63 to include paragraphs (a) enclosed spray gun cleaners, (c) dry particulate filter primer and topcoat application operations, (d) particulate filters depainting operations, and (f) reduction of monitoring data.

The units must also record and report the following VOC data:

Accurate and understandable records of consumption, which record at least the last five years of data, will be maintained in a permanent form suitable for inspection and be available immediately upon request. These records shall contain the following information:

(a) The type, quantity in gallons, and weight in lbs, of each VOC containing material used each calendar month.
(b) The amount of each VOC emitted each calendar month expressed in the units of pounds and tons.
(c) The rolling 12-month of each VOC emitted expressed in the units of pounds and tons.

CAM:

These sources are not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY.

<u>Natural Gas Boilers - Appendix A</u>

Emissions Standards:

- Particulate Emission Standard =

$E = 1.38H^{-0.44}$
where E = Emissions in pounds per million BTU
H = Heat Input in millions of BTU/hr

ADEM Admin. Code R. 335-3-4-.03-(1)

- SO_2 Emission Standard =

  4.0 lbs per million BTU heat input

ADEM Admin. Code R. 335-3-5-.01-(b)

These boilers shall burn natural gas only.

Expected Emissions: The maximum expected emissions, based on AP-42, from each source are as follows:

PM - 0.05 lb/hr and 0.22 TPY
NOx - 0.65 lb/hr and 2.85 TPY
SO_2 - 0.004 lb/hr and 0.017 TPY
VOC - 0.04 lb/hr and 0.16 TPY
CO - 0.55 lb/hr and 2.39 TPY

Periodic Monitoring:

Due to the low amount of expected emissions, no periodic monitoring is warranted.

CAM

These sources are not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY.

Fuel Oil Boilers - Appendix B

Emissions Standards:

- Particulate Emission Standard =

  $E = 1.38H^{-0.44}$
  where E = Emissions in pounds per million BTU
  H = Heat Input in millions of BTU/hr

ADEM Admin. Code R. 335-3-4-.03-(1)

- SO_2 Emission Standard =

  4.0 lbs per million BTU heat input

ADEM Admin. Code R. 335-3-5-.01-(b)

These boilers shall burn natural gas and No. 2 fuel oil. The sulfur content of the No. 2 fuel oil shall not exceed 0.5% by weight. Boilers B-4701-3, B-4701-4, B-301-1, B-301-2, B-301-3, and B-301-4 shall consume no more than a total of 1,000,000 gallons of No. 2 fuel oil in any consecutive 12-month period.

Expected Emissions: The maximum expected emissions, based on AP-42, from each source are as follows:

PM - 0.36 lb/hr and 1.57 TPY
NOx - 3.58 lb/hr and 15.69 TPY
SO_2 - 12.71 lb/hr and 55.69 TPY
VOC - 0.045 lb/hr and 0.197 TPY
CO - 0.89 lb/hr and 3.92 TPY

Periodic Monitoring:

Records of fuel oil sulfur content must be kept in a form suitable for inspection. These records shall be retained for at least five years following the date of generation and shall be made available upon request. Records of total rolling 12-month fuel oil consumption for boilers B-4701-3, B-4701-4, B-301-1, B-301-2, B-301-3, and B-301-4 must be kept in a form suitable for inspection. These records shall be retained for at least five years following the date of generation and shall be made available upon request.

CAM

These sources are not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY.

Fuel Oil Boiler - Building 30104 & 30103

Emissions Standards:

- Particulate Emission Standard =

$E = 1.38H^{-0.44}$
where E = Emissions in pounds per million BTU
H = Heat Input in millions of BTU/hr

ADEM Admin. Code R. 335-3-4-.03-(1)

- SO_2 Emission Standard =

4.0 lbs per million BTU heat input

ADEM Admin. Code R. 335-3-5-.01-(b)

These boilers shall burn No. 2 fuel oil only. The sulfur content of the No. 2 fuel oil shall not exceed 0.5% by weight or less.

Expected Emissions: The maximum expected emissions, based on AP-42, from each source are as follows:

PM - 0.043 lb/hr and 0.188 TPY
NOx - 0.43 lb/hr and 1.88 TPY
SO_2 - 1.53 lb/hr and 6.68 TPY
VOC - 0.007 lb/hr and 0.032 TPY
CO - 0.11 lb/hr and 0.47 TPY

Periodic Monitoring:

Periodic inspection of the boilers shall be performed once every year to include inspections of tubes, burners, and control valves to ensure the boilers operate as designed. Daily visual observations of the stack shall be conducted by personnel familiar with Method 9 of 40 CFR Part 60, Appendix A. If any visible emissions are observed, personnel certified in accordance with Method 9 of 40 CFR Part 60, Appendix A shall observe the emissions within two hours of the initial observation. If the certified observer determines the emissions have opacity of 10% or greater as determined by Method 9 of 40 CFR Part 60, Appendix A, the facility shall investigate and initiate any necessary corrective actions within 4 hours. After any corrective actions, an additional observation by personnel certified in accordance with Method 9 of 40 CFR Part 60, Appendix A shall be performed in order to verify that visible emissions have been reduced. A visible emissions observation is not required on days the unit is not in operation.

Records of the required daily visual inspections shall be maintained and should be readily available for inspection for a period of five years. These records shall include the date and results of the visual inspections. If any visible emissions are observed, the records shall include the date and time of the initial observation, and the date, time , and results of the Method 9 observation performed by personnel certified in accordance with Method 9 or 40 CFR Part 60, Appendix A. If corrective action is warranted, the records shall include a description of the corrective actions taken, the date and time of the initial corrective action attempt, and the results of the follow-up visual inspection. Records of boiler inspections and maintenance performed shall be maintained for a period of no less than 5 years following the date of generation. The fuel oil supplier certifications and/or the result of the fuel oil sulfur content testing shall be maintained for a period of no less than 5 years following the date of generation.

CAM

These sources are not subject to CAM since they do not have pre-controlled potential emission of greater than 100TPY and do not have a control device.

Firing Range Operations

Emissions Standards:

These operations are not subject to any standards other than the applicable standards contained in the general provisos.

Expected Emissions: Based on AP-42, the maximum expected emissions are listed below:

CO - 3.49 lb/hr and 15.0 TPY
VOC - 0.007 lbs/hr and 0.03 TPY
NO_x - 0.04 lbs/hr and 0.18 TPY
PM - 0.19 lb/hr and 0.81 TPY
SO_2 - 1.0E-08 lb/hr and 4.4E-08 TPY
Lead- 2.09E-03 lb/hr and 0.009 TPY

Periodic Monitoring

Due to the low amount of expected emissions, no periodic monitoring is warranted.

CAM

CAM is not applicable to the firing range operations since they do not use a control device, they have no emission limits, and do not have a pre-controlled potential of greater than 100 TPY.

Recommendation

Based on the above analysis and pending the resolution of any comments received during the 30-day public comment period and 45 day EPA review, I recommend issuing Ft. Rucker's Title V MSOP renewal.

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Kelli McCullough
Industrial Minerals Sections
Energy Branch
Air Division

March 9, 2010
Date